

**ANTECEDENTS AND IMPACTS OF E-BUSINESS  
ALIGNMENT AMONGST SMALL AND MEDIUM-SIZED  
ENTERPRISES**

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**DOCTOR OF PHILOSOPHY  
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**ANTECEDENTS AND IMPACTS OF E-BUSINESS ALIGNMENT AMONGST  
SMALL AND MEDIUM-SIZED ENTERPRISES**

**By**

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## ABSTRACT

E-business has great potentials for firms to extend their business efficiency. Nevertheless, due to various problems and constraints, the e-business deployment within SMEs sector has been reported as not effective. To ensure effective e-business deployment, necessary measures are needed to assess how firms align diverse e-business capabilities in support of their business operation. This study therefore aims to investigate the extent firms align diverse e-business capabilities across business processes (e-business alignment). Using a strategic fit perspective, this study has observed two major propositions. First, firms' ability to align e-business to support the most crucial business processes has potentially led to better realisation of e-business values. Secondly, certain managerial and environmental conditions have explained the differing characteristics of e-business alignment amongst firms. This study employs quantitative research approach using survey method to collect and collate evidences from 140 owner/managers of SMEs. Preliminary analysis has indicated e-business alignment/misalignment patterns across business functions. The cluster analysis further reveals three distinct profiles with different characteristics of e-business alignment. These profiles are labelled as 'highly fit', 'moderately fit' and 'low fit' based on their e-business fit characteristics. This result confirms the first proposition where highly aligned firms will report greater and wider e-business impacts. The second proposition reveals that environmental uncertainty, IT sophistication, owner/manager knowledge on advanced IT/IS, e-business deployment status, and support network are significant predictors to different e-business alignment characteristics among firms. This study suggests that firms relatively have different priority over e-business solutions to support their business. These findings have demonstrated why some firms do not progress to a higher e-business ladder. It further justifies unequal deployment of e-business solutions to support functions across firms.

**Keywords:** E-business, Strategic Alignment, Small and Medium-sized Enterprises (SMEs), Malaysia

## ABSTRAK

E-perniagaan berpotensi dalam meningkatkan tahap kecekapan operasi sesebuah firma. Namun, disebabkan pelbagai masalah dan kekangan, aplikasi e-perniagaan di kalangan IKS dilaporkan sebagai tidak berkesan. Untuk memastikan keberkesanan penggunaan aplikasi e-perniagaan di kalangan firma, adalah amat penting untuk menilai sejauh mana firma menyelaraskan (align) pelbagai aplikasi e-perniagaan dalam menyokong operasi perniagaan mereka. Oleh itu, kajian ini mengkaji sejauhmana firma menyelaraskan aplikasi e-perniagaan di dalam pelbagai aspek perniagaan (e-business alignment). Berasaskan perspektif penyelarasan strategik (strategic fit), kajian ini menyiasat dua isu utama. Pertama, firma yang mampu menyelaraskan aplikasi e-perniagaan di dalam operasi mereka akan merealisasikan manfaat yang lebih besar. Keduaanya, beberapa faktor berkaitan pengurusan dan persekitaran adalah berpotensi bagi menjelaskan tahap penyelarasan e-perniagaan yang tidak konsisten di kalangan firma. Kajian ini menggunakan pendekatan kuantitatif bagi mengumpul bukti kajian daripada 140 pemilik/pengurus firma menggunakan pendekatan soal selidik. Hasil kajian mengesahkan corak penyelarasan e-perniagaan yang tidak konsisten dalam pelbagai aspek perniagaan. Analisis kluster mengenalpasti dan mengesahkan tiga profil dengan tahap penyelarasan e-perniagaan yang berbeza. Profil tersebut dilabelkan sebagai 'highly-fit', 'moderately fit', dan 'low fit' berdasarkan tahap penyelarasan e-perniagaan masing-masing. Analisis selanjutnya mengesahkan saranan pertama dimana firma dengan tahap penyelarasan e-perniagaan yang lebih tinggi akan melaporkan faedah yang lebih tinggi. Bagi saranan kedua, didapati ketidaktentuan persekitaran, tahap kematangan IT, tahap kemahiran IT pemilik/pengurus, status aplikasi e-perniagaan, dan rangkaian sokongan adalah faktor yang berbeza secara signifikan di kalangan tiga profil tersebut. Kesimpulannya, didapati bahawa IKS mempunyai keutamaan yang berbeza terhadap e-perniagaan. Ini dapat menjelaskan mengapa tidak banyak firma yang menggunakan e-perniagaan secara lebih meluas serta penggunaan aplikasi e-perniagaan yang tidak konsisten di kalangan firma.

**Kata kunci:** E-perniagaan, Penyelarasan Strategik, Industri Kecil dan Sederhana (IKS), Malaysia

## DEDICATION

For my parents and parents-in-law,

*Mohamad Othman & Habsah Muhamad;*

*Mohd. Nor Yusuf & Shaedah Che Mamat*

My beloved wife,

*Norliza Mohd Nor;*

*and*

Not to forget my two little princesses,

*Fatin Zahra and Fatin Husna*



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## **LIST OF ABBREVIATIONS**

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9MP	Ninth Malaysia Plan
10MP	Tenth Malaysia Plan
AIS	Accounting Information Systems
ANOVA	Analysis of Variance
APEC	Asia Pacific Economic Cooperation
BPI	Business Process Importance
BPMB	Bank Pembangunan Malaysia Berhad
CEO	Chief Executive officer
CRM	Customer Relationship Management
EBC	E-Business Capabilities
EDI	Electronic Data Interchange
EIU	Economist Intelligence Unit
ERP	Enterprise Resource Planning
ETP	Economic Transformation Plan
GDP	Gross Domestic Products
IT/IS	Information Technology/Information Systems
IOS	Inter-organisational Information systems
ICT	Information and Communication Technology
ITU	International Telecommunication Union
KMO	Kaiser Meyer Olkin
MAMPU	Malaysian Administrative Modernisation and Management Planning Unit
MATRADE	Malaysia External Trade and Development Corporation
MAVCAP	Malaysian Venture Capital Management
MDA	Multiple Discriminant Analysis
MDeC	Multimedia Development Corporation
MLR	Multinomial Logistic Regression
MPC	Malaysia Productivity Corporation
MICC	Ministry of Information, Communications, and Culture

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MIDF	Malaysian Industrial Development Finance
MIS	Management Information Systems
MITI	Ministry of International Trade and Industry
MOSTI	Ministry of Science, Technology, and Innovation
MRP	Materials Requisition Planning
MTDC	Malaysia Technology Development Corporation
MSC	Multimedia Super Corridor
NKEA	National Key Economic Area
NITA	National IT Agenda
NITC	National IT Council
NEM	National Economic Model
NPC	National Productivity Corporation (former name of MPC)
NSDC	National SME Development Council
OECD	Organisation for Economic Co-operation and Development
OIPT	Organisational Information Processing Theory
PCA	Principal Component Analysis
SAM	Strategic Alignment Model
SCM	Supply Chain Management
SCORE	SMEs Competitiveness Rating for Enhancement
SEAP	SMEs Expert Advisory Panel
SMEs	Small and Medium-Sized Enterprises
SME Corporation	Small and Medium-Sized Corporation
SMIDEC	Small and Medium-sized Industry Development Corporation (former name of SME Corporation)
SPSS	Statistical Package for Social Sciences
TTF	Task-Technology-Fit
UNDP	United Nation Development Programme
VIF	Variance Inflation Factor
WASME	World Association for SMEs
WIPO	World Intellectual Property Organisation

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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 BACKGROUND**

SMEs contribute substantially to both the economic and social growth of most countries. This sector plays substantial roles in promoting higher Gross Domestic Product (GDP), greater export activities, and employment opportunities (World Association for SMEs [WASME], 2006). As they are generally domestic-oriented business, thus their trading activities would have direct impacts to a nation's economy (Kotelnikov, 2007). Considering its vital roles in both developed and developing economies, many international agencies such as the United Nation (UN), World Bank, World Intellectual Property Organisation (WIPO), and Organisation for Economic Co-operation and Development (OECD) come into play to facilitate firms to have a meaningful role in the economic system worldwide.

The SMEs also play greater roles in ensuring competitiveness of most developing and transitional economies. In the Asia Pacific region, more than 95% of businesses are SMEs with more than 70% belong to micro firm category (Asia Pacific Economic Cooperation [APEC], 2011). The report further shows that out of 49 million SMEs in this region, about half of them are currently operating in China and Indonesia. Considering substantial presence of the SMEs in this region, their activities could be an important indicator of entrepreneurial health and competitiveness of a particular country.



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